```
Set       Items    Description
S1        2702     CURVE()CRYPTOGRAPH? OR ELLIPTIC OR HYPERELLIPTIC
S2        5821     JACOBI?
S3           7     STICKELBERGER OR STICKERBERGER
S4           0     S1 AND S2 AND S3
S5          38     S1 AND S2
S6        1186     CURVE(N)CRYPTOGRAPH?
S7        2704     S1 OR S6
S8           0     S7 AND S3
S9          38     S7 AND S2
S10         16     S9 NOT PY>1999
S11         16     S10 NOT PD>19990827
S12         15     RD (unique items)
```

File  15:ABI/Inform(R) 1971-2004/Apr 13
         (c) 2004 ProQuest Info&Learning
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 647:CMP  Computer Fulltext 1988-2004/Apr W1
         (c) 2004 CMP Media, LLC
File 275:Gale Group Computer DB(TM) 1983-2004/Apr 15
         (c) 2004 The Gale Group
File 674:Computer News Fulltext 1989-2004/Apr W1
         (c) 2004 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2004/Apr 14
         (c) 2004 The Dialog Corp.
File 624:McGraw-Hill Publications 1985-2004/Apr 14
         (c) 2004 McGraw-Hill Co. Inc
File 636:Gale Group Newsletter DB(TM) 1987-2004/Apr 15
         (c) 2004 The Gale Group
File 484:Periodical Abs Plustext 1986-2004/Apr W2
         (c) 2004 ProQuest
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 613:PR Newswire 1999-2004/Apr 15
         (c) 2004 PR Newswire Association Inc
File  16:Gale Group PROMT(R) 1990-2004/Apr 15
         (c) 2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 141:Readers Guide 1983-2004/Apr
         (c) 2004 The HW Wilson Co
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 553:Wilson Bus. Abs. FullText 1982-2004/Apr
         (c) 2004 The HW Wilson Co

02567117  209233181
**Preconditioned CG-like methods for solving non-linear convection-diffusion equations**
G H Juncu; I Iliuta
International Journal of Numerical Methods for Heat & Fluid Flow  v5n3
PP: 239-250  Mar 1995
ISSN: 0961-5539  JRNL CODE: NMHF
WORD COUNT: 2957

...TEXT: and conjugate residual methods have been proposed for solving non-symmetric linear systems. For non-self-adjoint **elliptic** problems with variable coefficients, where the character of the problem may vary depending on the position in...

... which ceases to be an M-matrix when convection dominates diffusion. The system matrix, i.e. the **Jacobian** matrix structure depends on the non-linearity type. Special attention is dedicated to the influence of the ...18, 142-156 (1978)

3 Kuo, C.-C. J., Chan, T. F. and Tong, C. Multilevel filtering **elliptic** preconditioners, SIAM J. Matrix Anal. Appl., 11, 403-429 (1990)
4 Elman, H. C. Relaxed and stabilized...

...5 Elman, H. C. and Schultz, M. H. Preconditioning by fast direct methods for nonsell-adjoint nonseparable **elliptic** equations, SIAM J. Num. Anal., 23, 44-56 (1986)

6 Adam, D. Mesh independence for Galerkin approach...

02313051  86920240
**Multilevel solution of augmented drift-diffusion equations**
M.B. Davis; G.F. Carey
Compel v15n2  PP: 4-18  1996
ISSN: 0332-1649  JRNL CODE: COPL
WORD COUNT: 4881

...TEXT: been shown to be an efficient method of solution for linear systems arising from the discretization of **elliptic** boundary-value problems[12, 13, 14, 15]. Discretization of the electrostatic potential equation and the electron and...methods

Multigrid methods were first developed to solve large, sparse linear systems arising from the discretization of **elliptic** problems[12]. These schemes have proven to be very efficient in the solution of such systems, especially...

...not been previously studied.

The essential idea behind multigrid schemes is that certain iterative methods such as **Jacobi** or Gauss-Seidel point iteration do very well in damping high frequency components of the error near...accuracy for the same number of grid points. The $L[sup]2$ finite element error estimate for **elliptic** PDEs of the form considered here [1] is

where r is the regularity of the solution and...

12/3,K/3     (Item 3 from file: 15)

02240464  84988461
**Three-dimensional finite element simulation of connecting rod forging using a new remeshing scheme**
Cho, J R; Yang, D Y
Engineering Computations  v15n6  PP: 777-803  1998
ISSN: 0264-4401  JRNL CODE: NGCP
WORD COUNT: 5358


...TEXT:  interference with the die. Moreover, further computation might be impossible without remeshing if the determinant of the **Jacobian** transformation matrix is negative. In general, such interference and mesh degeneracy occur at the contact region of...

... generation of the mesh by the body-fitted mapping technique can be accomplished by solving numerically the **elliptic** partial differential equation with Dirichlet condition[19, 20, 21]. It is important that the coordinate system and...

...u,v,w)  for which u,v and w are the solutions of the following system of **elliptic** partial differential equations:
(27)

where --[sup]2 denotes the Laplacian operator. The grid coordinates of each hexahedron... is calculated by mapping an element in transformed space against the actual element. The determinant of the **Jacobian** relates the transformed space to the physical space as

(31)

where  |J|  is the determinant of **Jacobian** , dxdydz and d[xi]d[eta]d[zeta] are values of infinitesimal volumes for a physical element...20. Mastin, C.W. and Thompson, J.F., "Transformation of three-dimensional regions onto rectangular regions by **elliptic** systems", Number. Math., Vol. 29, 1978, pp. 397-407.

21. Miki, K. and Takagi, T., "A domain...


**12/3,K/4** **(Item 1 from file: 647)**

00647114  CMP ACCESSION NUMBER: CRN19890227S3997
**The Mass Market's Revenge**
COMPUTER RESELLER NEWS, 1989, n 303, 77
PUBLICATION DATE: 890227
JOURNAL CODE: CRN  LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: 303PG77A
WORD COUNT: 220

... software was developed for the serious calculator-in-shirt- pocket set. While it offered packages such as **Jacobian** **Elliptic** Functions, Einstein Distortions and Spherical Triangles, HP did not offer word-processing, accounting or portfolio-management software...


**12/3,K/5** **(Item 1 from file: 275)**

01557066  SUPPLIER NUMBER: 14516638  (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Highly efficient second harmonic generation.**
Beausoleil, Raymond G.

...      Mathematical Expression Omitted]
then the SHG conversion efficiency is given by
where sn(u,[micro]) is the **Jacobian elliptic** sine function. While
this special function is unfamiliar to many of us, it is described in
detail...At higher nonlinear drives, the efficiency actually decreases. (In
fact, due to the periodic nature of the **Jacobian elliptic** sine
function, the conversion efficiency will continue to rise and fall as the
drive is increased.) In...maximum efficiency obtained in the previous step.
The function K(z) in Figure 4 is the Complete **Elliptic** Integral of the
First Kind, which can be evaluated numerically using prepackaged
subroutines,(5) but the approximation...


**12/3,K/6      (Item 2 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)

01295247     SUPPLIER NUMBER: 07589645     (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Intelligence in scientific computing.**
Abelson, Harold; Eisenberg, Michael; Halfant, Matthew; Katzenelson, Jacob;
Sacks, Elisha; Sussman, Gerald J.; Wisdom, Jack; Yip, Kenneth
Communications of the ACM, v32, n5, p546(17)
May, 1989
ISSN: 0001-0782      LANGUAGE: ENGLISH      RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT:   8052    LINE COUNT:   00664

...      is KAM's description of the picture it generates for Hennon's map:
The portrait has an **elliptic** fixed point at (0, 0). Surrounding the
fixed point is a regular region bounded by a KAM...equations and compiles
an iterative scheme for approximating these variables. This requires
symbolic differentiation to produce a **Jacobian** that is incorporated into
a Newton-Raphson search and to augment the system state so that it...


**12/3,K/7      (Item 3 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)

01214070     SUPPLIER NUMBER: 07287627
**Parametrizing and graphing nonsingular cubic curves. (technical)**
Patterson, R.R.
Computer-Aided Design, v20, n10, p615(9)
Dec, 1988
DOCUMENT TYPE: technical      ISSN: 0010-4485      LANGUAGE: ENGLISH
RECORD TYPE: ABSTRACT

ABSTRACT:   **Elliptic** functions are used to parametrize and graph
nonsingular cubic curves. First, a sequence of transformations is derived
that reduces a third degree equation to a standard equation. A
parametrization in terms of **elliptic** functions is given for the graph of
the standard equation. The transformations convert this parametrization to
a...
CAPTIONS:  Period parallelograms of **Jacobi elliptic** functions. (chart);
Various equation types. (graph)


**12/3,K/8      (Item 4 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)

01183986     SUPPLIER NUMBER: 06556331
**Software considerations for the "Black Box" solver FIDISOL for partial**

**differential equations.**
Schonauer, Willi; Schnepf, Eric
ACM Transactions on Mathematical Software, v13, n4, p333(17)
Dec, 1987
ISSN: 0098-3500     LANGUAGE: ENGLISH     RECORD TYPE: ABSTRACT

...ABSTRACT:  the solution of partial differential equations (PDE's). It
solves nonlinear systems of two-and three-dimensional **elliptic** and
parabolic PDE's with nonlinear boundary conditions on the boundaries of a
rectangular domain. Fidisol is...
CAPTIONS:  Program listing-program frame for the PDE's (program); Program
listing-program frame for the **Jacobian** matrices for the BDs. (program);
Program listing-caLl and parameter list of Fidisol for three-dimensional.
(program)


**12/3,K/9      (Item 1 from file: 484)**
DIALOG(R)File 484:Periodical Abs Plustext

04203949    (USE FORMAT 7 OR 9 FOR FULLTEXT)
**Mathematics of the 19th Century:  Geometry/Analytic Function Theory**
Ewing, John
College Mathematics Journal (PCMJ), v30 n2, p159-161, p.3
 Mar 1999
 ISSN: 0746-8342     JOURNAL CODE:  PCMJ
 DOCUMENT TYPE:  Book Review-Favorable
 LANGUAGE: English          RECORD TYPE:  Fulltext; Abstract
WORD COUNT:  1597


TEXT:
...     future. The work of Gauss on geometry serves as one example. That
work was taken up by **Jacobi** and Minding during the next fifty years, not
with applications in mind but because the mathematics was...

...in the work of Cauchy, Dirichet, and Weierstrass? Who could have known
that the fussy calculations of **Jacobi** , Eisenstein, and **Jacobi** on
**elliptic** curves and analytic functions would lead first to a proof of the
Prime Number Theorem at the...


**12/3,K/10     (Item 2 from file: 484)**
DIALOG(R)File 484:Periodical Abs Plustext

04078191    (USE FORMAT 7 OR 9 FOR FULLTEXT)
**Exact solution of Fermat's equation (a definitive resolution of Fermat's
   last theorem)**
Escultura, E E
Nonlinear Studies (NON), v5 n2, p227-254, p.28
 1998
 ISSN: 1359-8678     JOURNAL CODE:  NON
 DOCUMENT TYPE:  Feature
 LANGUAGE: English          RECORD TYPE:  Fulltext; Abstract
WORD COUNT:  5778


TEXT:
...     41] the space of surfaces is enlarged to insure existence. This is
achieved by allowing set-valued **jacobian** of a vector partial differential
equation satisfying the requirements in [41] with unit measure or
probability distribution. A generalized **Jacobian** is the expectation of a
set-valued **jacobian** with probability distribution. Thus, the local
solution of a given partial differential equation with set-valued **Jacobian**
 depends on its probability distribution; consequently, the solution space
forms a family of surfaces each of which...
...a generalized surface. A conventional surface is a solution of
conventional partial differential equation (with well-defined **Jacobian** )

satisfying the requirements in [41]. Probability distribution introduces
uncertainty in the space of generalized surfaces. Another level...then find
the partial derivatives of z with respect to u and v, respectively, and
form the **Jacobian** at any point corresponding to given values of u and v.
Since Equation (1) consists of polynomial...

...c) in S, we can take, say, a parametric curve in it containing this
point and the **Jacobian** there as initial and boundary conditions. They
would be necessary conditions satisfied by Equation (1) as solution...1946)
Fermat's's Last Theorem, Amer. Math. Monthly 53, 555-578. (33) Wiles, A.
(1995) Modular **elliptic** curves and Fermat's Last Theorem, Annals of Mathe
matics 141(3), 443-551.
    Wiles, A. and...


**12/3,K/11      (Item 3 from file: 484)**
DIALOG(R)File 484:Periodical Abs Plustext
(c) 2004 ProQuest. All rts. reserv.

03486519
**Parametrizations of** elliptic **curves by Shimura curves and by classical
  modular curves**
Ribet, Kenneth A; Takahashi, Shuzo
Proceedings of the National Academy of Sciences of the United States of
America (IPNA), v94 n21, p11110-11114, p.5
 Oct 14, 1997
 ISSN: 0027-8424       JOURNAL CODE:  IPNA
 DOCUMENT TYPE:  Feature
 LANGUAGE:  English          RECORD TYPE:  Abstract

**Parametrizations of** elliptic **curves by Shimura curves and by classical
  modular curves**

...ABSTRACT:  Takahashi examine relations between delta and analogues of
delta in which J0(N) is replaced by the **Jacobian** of a Shimura curve.


**12/3,K/12      (Item 4 from file: 484)**
DIALOG(R)File 484:Periodical Abs Plustext
(c) 2004 ProQuest. All rts. reserv.

03107241
**New infinite families of exact sums of squares formulas,** Jacobi **elliptic
  functions, and Ramanujan's tau function**
Milne, Stephen C
Proceedings of the National Academy of Sciences of the United States of
America (IPNA), v93 n26, p15004-15008, p.5
 Dec 24, 1996
 ISSN: 0027-8424       JOURNAL CODE:  IPNA
 DOCUMENT TYPE:  Feature
 LANGUAGE:  English          RECORD TYPE:  Abstract

**New infinite families of exact sums of squares formulas,** Jacobi **elliptic
  functions, and Ramanujan's tau function**

ABSTRACT:  Researchers give two infinite families of explicit exact
formulas that generalize **Jacobi** 's (1829) four and eight squares
identities to 4n to the second power or 4n(n plus...


**12/3,K/13      (Item 5 from file: 484)**
DIALOG(R)File 484:Periodical Abs Plustext
(c) 2004 ProQuest. All rts. reserv.

02767862   (USE FORMAT 7 OR 9 FOR FULLTEXT)
**Leibniz and Clarke on miracles**
Vailati, Ezio

TEXT:
...     one. That is, in relation to the whole cosmos it may be better that
Jupiter follows an  **elliptic** trajectory, but there is nothing in Jupiter
itself which justifies or grounds it. In this respect, Leibniz...VI. 56
Notes, pp. 81-83 of the 1702 edition; in Hoskin, "Mining All Within," 359.
57 **Jacobi** Rohaulti Physica; latine vertit, recensuit et uberioribus iam
Annotationibus, ex illustrissimi Isaaci Newtoni Phosophia maximam partem
haustis...


**12/3,K/14      (Item 6 from file: 484)**
DIALOG(R)File 484:Periodical Abs Plustext

01388968
**Charged particle trajectories in simple nonuniform magnetic fields**
Repko, Jane M; Repko, Wayne W; Saaf, Allan

...ABSTRACT: plane of the motion is presented.  The parametric equations
for the trajectory are expressible in terms of  **Jacobi    elliptic**
functions.


**12/3,K/15      (Item 1 from file: 160)**
DIALOG(R)File 160:Gale Group PROMT(R)

02259260
**PC-MATLAB v3.5 Supports PC/AT Protected Mode, Adds New Functions**
News Release   May, 1989   p. 1

     ...solution of ordinary differential equations and systems of nonlinear
equations,    numerical    function    integration,    unconstrained  nonlinear
optimization,   complete   **elliptic**   integral  of  the first kind, **Jacobi**
**elliptic**  functions, and other numeric techniques.
...